

(a) [2] 0.5; $\frac{C(3,1)C(7,3)}{C(10,4)} = \frac{3(35)}{210} = 0.5$

(b) [2] 0.17; $\frac{1}{6} \approx 0.17$

(c) [2] 0.23; $P(A|M) = \frac{P(M|A)P(A)}{P(M|A)P(A)+P(M|B)P(B)} = \frac{\frac{3}{10}(0.35)}{\frac{3}{10}(0.35)+\frac{5}{9}(0.65)} \approx 0.23$